

Site: Shiloh Church Road Site

Task: Excavation

Date: 9/17/19

Predicted Predominant Wind Direction: NE

Predicted Maximum Wind Speed: 9 mph



Ludlum 3030 Serial Number:	187982	Cal Due Date:	2/19/2020
Th-230 4π efficiency:	0.3244	Tc-99 4π efficiency:	0.3155
Pu-239 4π efficiency:	0.3996	C-14 4π efficiency:	0.0679
Am-241 4π efficiency:	0.3452	Sr-90 4π efficiency:	0.4264

Notes: AC-5 assigned to Excavation Team

Radionuclide Air Sampling
Daily Summary
Shiloh Church Road Site
Halifax County, Virginia

Date: 9/17/19	Predicted Predominant Wind Direction: NE
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Public Results

Effluent Limits	Alpha (Ra-226)	9.00E-13	Beta (Pb-210)	6.00E-13
Air Sampler Location	% Of Effluent Concentration Limit	Alpha Result	% Of Effluent Concentration Limit	Beta Result
Perimeter-1 - SW Perimeter	<1.45%	-5.22E-15	<65.56%	-2.09E-14

Worker Results

Derived Air Concentrations	Alpha (Ra-226)	3.00E-10	Beta (Pb-210)	1.00E-10
Tasks Monitored	% Of DAC	Alpha Result	% of DAC	Beta Result
AC-5 - Excavation Team	<0.11%	-8.82E-14	<9.78%	-6.52E-12

Comments:

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Air Sampling Unit: Radeco H-810 ERT-148

Calibrator Serial: 3267

Cal Due Date: 8/9/19

α isotope of concern

Ra-226

β isotope of concern

Pb-210

Start Date/Time	9/17/19 8:42				Stop Date/Time				9/17/19 17:13				
					Total Liters				55,438				
Analysis Date/Time	Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)
9/20/19 14:46	69.5	120	60	99	37	-0.21	1.31E-14	-5.22E-15	4671	2325	-0.17	3.93E-13	-2.09E-14
Final Result	Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)
9/20/19 14:46	69.5	120	60	99	37	-0.21	1.31E-14	-5.22E-15	4671	2325	-0.17	3.93E-13	-2.09E-14
							% Eff Criteria:	<1.45%				% Eff Criteria:	<65.56%

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Air Sampling Unit: AirCheck XR5000 AC-5

Dry Cal Serial: 132112

Cal Due Date: 7/11/20

Dry Cal Serial: 132112					Cal Due Date: 7/11/20					α isotope of concern			Ra-226	β isotope of concern			Pb-210	
Pre Flow Rate (LPM)		4.670					Post Flow Rate (LPM)				4.741							
Start Date/Time		9/17/19 8:55					Stop Date/Time				9/17/19 17:15							
							Total Liters				2230.3							
Analysis Date/Time		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)				
9/20/19 11:37		66.4	120	60	99	41	-0.14	3.25E-13	-8.82E-14	4671	2204	-2.19	9.78E-12	-6.52E-12				
Final Result		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)				
9/20/19 11:37		66.4	120	60	99	41	-0.14	3.25E-13	-8.82E-14	4671	2204	-2.19	9.78E-12	-6.52E-12				
								% DAC:	<0.11%				% DAC:	<9.78%				

Notes: Assigned to Excavation Team.